

# **EDUCATION:**

## **A Strategy for Prevention Practitioners**

**Developed by  
CSAP's Northeast Center for the Application of  
Prevention Technologies**



**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES**  
Substance Abuse and Mental Health Services Administration  
Center for Substance Abuse Prevention  
[www.samhsa.gov](http://www.samhsa.gov)



We are pleased to welcome you to CSAP's Northeast Center for the Application of Prevention Technologies (CAPT). Since 1997, we have been working with six New England and five Mid-Atlantic States to effectively transfer knowledge to prevention practitioners at the local level and to strengthen their capacity to prevent and reduce alcohol and other drug use in youth ages 12–17.

The Center for Substance Abuse Prevention (CSAP) in the Substance Abuse and Mental Health Services Administration is the nation's lead agency for substance abuse prevention. In addition to funding studies to test research-based models, CSAP spreads the word about proven program interventions that will enhance the efforts of prevention practitioners, policymakers, and evaluators. We hope that you will visit the CSAP website at [www.samhsa.gov/csap/](http://www.samhsa.gov/csap/).

This series includes documents on Policy, Enforcement, Collaboration, Communications, Education, Early Intervention, and Alternatives. Special thanks to Shai Fuxman, Stephanie Malloy, Michael J. Rosati, and Nora Drexler at CSAP's Northeast CAPT for their assistance in creating this document.

Funded by the Center for Substance Abuse Prevention (CSAP), Substance Abuse and Mental Health Services Administration Grant #UD1-SPO8999-03.

# **EDUCATION: A STRATEGY FOR PREVENTION PRACTITIONERS**

## **WHAT WORKS IN PREVENTION?**

Researchers at the national level are making great strides toward answering this important question. In recent years, they have distilled effective strategies and principles from the many programs that seek to prevent and reduce substance abuse. Now, across the country, more and more practitioners are coming to understand how critical it is to identify and use evidence-based strategies that are likely to be effective in meeting the needs of the people they serve.

For the Center for Substance Abuse Prevention (CSAP), Gardner and Brounstein have identified principles of effective substance abuse prevention.<sup>1</sup> From these, CSAP's Northeast CAPT has specified seven effective prevention approaches.

- Policy
- Enforcement
- Collaboration
- Communications
- Education
- Early Intervention
- Alternatives

Education, the focus of this paper, is a strategy that includes providing knowledge and information and the decision-making skills necessary for making healthy choices regarding alcohol, tobacco, and drug use. Most people typically think of education as a school-based activity. While schools do have an essential role to play in a community's comprehensive prevention program, the strategy of education can be applied in a number of settings. In addition to school-based programs, education can be used by community-based organizations to support out-of-school youth and adults. Parents can benefit from education programs that provide them with the information, resources, tools and skills to better support their children in the area of ATOD. Adults can be educated regarding their own use as well as their role in supporting community-wide prevention programs. Professionals (such as health care providers, criminal justice professionals, and the faith community) can also benefit from education programs that examine the ways in which they can support prevention efforts. Finally, the strategy of education can be used to teach merchants and servers the proper procedures for obtaining positive identification from purchasers of alcohol and tobacco products.

A review of the literature on effective practices suggests that educational strategies are most likely to be effective if they do one or more of the following:

- Foster young people's social skills and attachment to the school and community
- Target all forms of substance abuse, including the use of tobacco, alcohol, marijuana and inhalants
- Include skills to resist drugs when offered, strengthen personal commitments against drug use and increase social competency, in conjunction with attitudes against drug use

- Include interactive methods, such as peer discussion groups rather than didactic teaching techniques alone
- Are long-term over the school career with repeated interventions
- Strengthen norms of the community, including family and school
- Reach all populations, including sub-populations at risk such as children with behavior problems or learning disabilities or those who are potential dropouts
- Are adapted to meet the specific nature of the substance abuse problem in the community
- Are more intensive and have an earlier intervention the higher the level of risk of the population
- Are age-specific, developmentally appropriate and culturally specific
- Include media campaigns and policy changes
- Include an educational component for parents, with information about drugs for both them and their children
- Focus on training merchants, servers, and other adults to improve their selling and serving practices

Of course, as is the case with all of the key strategies listed above, education works best as part of a comprehensive program approach. As communities around the country are learning, the key to effective prevention is to use multiple strategies, in multiple domains, toward a set of clearly defined and measurable goals. Communities should examine their local situations, identifying their specific needs and resources as well as human, technical and financial capacities. After gathering critical baseline data and conducting a resource gap analysis, communities should use the most compelling data to formulate best practice strategies that will reduce their community's vulnerabilities and enhance the protective, nurturing elements in the community.

Strategies need to be data driven, theory driven and evidence-based and drug prevention programs selected for implementation need to be science based and appropriate for the target audience. Validated assessments, archival indicators and community readiness surveys are helpful in the program selection process.

A process and outcome evaluation needs to be conducted during the implementation of the drug prevention program to document progress and provide evidence of success. Results shared with the community and school population will increase support and contribute to the sustainability of the program. Communities need to intersect science and practice by using the seven strategies that have proven effective: policy, enforcement, collaboration, communications, education, early intervention, and alternatives.

***Multiple strategies, in multiple domains, toward a set of clearly defined goals.***

## WHAT DO WE MEAN BY EDUCATION?

Education is one of the most commonly used strategies for attempting to discourage young people from using alcohol, tobacco, or illegal drugs. In the past, the rationale for the typical education program was, “The more young people know about the dangers of substances, the risk of addiction, and the penalties for underage drinking/smoking or use of illegal drugs, the more likely they will be to make healthier choices when it comes time to have fun or cope with everyday difficulties.” For many years, prevention education focused on teaching children about those dangers and risks. However, behavioral scientists who began to study educational programs ultimately found that while such programs may increase young people’s *knowledge and awareness* of the problems inherent in substance use, they do not necessarily affect young people’s *behavior*. In fact, in many cases, simply providing young people with information regarding the dangers of drug use led to an *increase* in drug use! Mere knowledge is apparently not enough to keep youth off drugs. The other pressures and dynamics of youth—peer acceptance, exploration, thrill seeking, rebellion against social mores, or coping with familial, interpersonal, or psychological difficulties—may override the role of knowledge in a young person’s decisions about whether to experiment with alcohol, tobacco, or illicit drugs.

Instead, what young people most need to learn—and what seems to help them best avoid using substances—are the *skills* to refuse drugs, to think critically about the messages they receive from peers and the media, and to make healthier choices in all areas of their lives. Research on what makes some children more resilient than others has repeatedly shown that the healthiest youth are those who have a clear self-concept and sense of direction, social intelligence, critical-thinking skills, the ability to express and manage their emotions, and the capacity to form meaningful attachments to peers and adults at home, in school, and in the community.

Education for adults can play a significant role as well. Public education can raise awareness among broad numbers of people and strengthen environmental approaches to prevention. Parent training in conjunction with programs for their children at school can enable parents to reinforce healthy messages at home. Server training programs can teach bartenders and wait staff to avoid serving minors and intoxicated customers. Merchants can be educated about the laws and penalties for selling alcohol or tobacco to underage customers.

In addition to its role as a key prevention strategy, education can also be a component of many other substance abuse prevention strategies. For example, public education is generally considered a *communications* strategy, as it is typically delivered through mass media and usually focuses on imparting knowledge to large populations. This strategy includes providing information about the nature and extent of drug use and is generally characterized through information dissemination as one-way communication from the source to the audience.

Educational strategies are integrated into many of the most effective *alternative* programs. The goal of this activity is to participate in drug-free activities. Examples include social and recreational activities, drug-free dances and parties, youth and adult leadership activities, drop-in centers, community service activities and mentoring programs.

Education is also used in *early intervention* programs for young people and families at highest risk of substance use. This strategy aims to identify those who have indulged in the illegal use of drugs in order to determine whether their behavior can be reversed through education. Examples may include education programs, employee assistance programs and student assistance programs.

This paper focuses on the use of educational strategies to effect knowledge and behavior change, specifically:

- School-based prevention programs for young people
- Parent education to complement school-based instruction
- Training for servers and merchants

## WHAT ARE THE MAJOR TYPES OF EDUCATIONAL STRATEGIES?

### **School-Based Skill-Building Programs**

Among the most promising of prevention programs are those that teach young people important life skills, such as the ability to interact well with others, resist peer pressure, make responsible decisions, delay gratification, and think critically about media messages regarding alcohol, tobacco, and other drugs. Research on resiliency consistently shows that young people who have a positive self-image and a sense of accomplishment and autonomy are better able to resist drugs and alcohol than those who have low-self esteem and poor social skills.<sup>2</sup>

Instructional approaches that combine social and critical-thinking skills are one of the most effective ways to enhance individual attitudes and behaviors inconsistent with substance abuse and other kinds of delinquent behavior. These methods tend to be far more effective at changing behavior than educational programs that focus on imparting knowledge about substances and the adverse effects of substance abuse.

For example, many alcohol and drug prevention programs have included social resistance training as a strategy for reducing adolescent substance use. These programs are based on research that indicates that the acquisition of this key competency does in fact decrease the likelihood that a young person would use alcohol and other drugs. A study demonstrated that poor refusal efficacy was associated with more risk-taking, lower grades, and more alcohol use.<sup>3</sup> On the other hand, young people who were competent in refusal skills reported lower alcohol use in both the eighth and tenth grades.

In addition to teaching young people refusal skills, prevention education covers a wide range of critical-thinking and social skills that enable young people to be effective in all areas of their lives. The chart below defines some of the skills that help young people resist substance use and other unhealthy or dangerous behaviors.

### Critical-Thinking and Social Skills

- ***Empathy and perspective taking*** teaches students that people can have different views of the same situation.
- ***Social problem solving*** teaches students to engage in a series of steps that involve setting positive social goals, generating alternative solutions to social problems, anticipating the likely consequences of different actions, choosing the best course of action, and successfully executing the solution.
- ***Anger management*** helps students understand that anger is a normal emotion and helps them explore healthy and unhealthy ways of expressing anger.
- ***Communication*** teaches students active listening, understanding of nonverbal communication, and ways to express themselves constructively.
- ***Stress management*** provides students with healthy strategies for dealing with or relieving stress or anxiety.
- ***Media literacy*** teaches students to recognize and resist media influences that glorify substance use or other risky behaviors.
- ***Assertiveness training*** teaches students how to go after what they want in a manner that is neither hostile nor provocative.
- ***Normative education*** is education designed to provide accurate information about the prevalence of underage drinking and drug use, helps young people understand how their beliefs and perceptions affect their choices, and corrects misconceptions that may lead to unhealthy behavior.
- ***Resistance skills training*** teaches about the social influences that promote substance use and violence, and builds skills for resisting peer and media influences.

### Principles of effective skills-building programs

While the research literature is clear that a skills-based education approach is more effective than a program that focuses on providing information, a program's success is also dependant on a number of other factors that must be considered prior to implementation. For example, successful programs should do the following:

- ***Combine broader-based life skills instruction with resistance skills training.*** Certain sets of skills are particularly effective for preventing the rates of onset and prevalence of alcohol, tobacco, and other drug use. These skills include empathy, social problem solving, impulse control, communication, stress management or coping, media resistance and assertiveness.
- ***Include an adequate "dosage" of instruction.*** At a minimum, skills-based instruction programs should include 10 to 15 sessions per year and another 10 to 15 booster sessions offered one to several years after the original intervention. Longer, more comprehensive skills-based programs that cover longer periods produce broader and more enduring changes. Furthermore, booster sessions help students maintain skills over a longer period.
- ***Reach children from kindergarten through high school.*** Substance abuse prevention instruction strategies are more likely to be effective when they start with young children in order to prevent the later use or abuse of substances.<sup>4</sup> It is especially important to reach



students in the middle school or junior high years. During this time of transition, many young people begin smoking cigarettes and drinking alcohol. It is therefore important to offer programs that contain multiple, sequential years of intervention.

- ***Use age-appropriate, interactive teaching methods.*** Interactive approaches that engage students in learning are more effective than didactic approaches.<sup>5</sup> Interactive approaches include modeling, role playing, discussion, group feedback, skill reinforcement, extended practice, cooperative learning, and student-centered learning techniques.
- ***Foster pro-social attachment to the school and community.*** Students' lack of attachment to school may be related to unsatisfying academic experiences. Prevention interventions may address this issue by including components that offer academic skill building for students.
- ***Include components that are led by students.*** Educational approaches that include peer-led components are more effective than programs that do not.<sup>6</sup> Peer educators usually require extensive prior instruction to prepare them to present before or engage their peers. These programs may offer one-to-one instruction or large-group instruction.
- ***Include an educational component for parents with drug information for both them and their children.*** Educational approaches that target parents or complement student-focused curricula with parent-focused curricula can be effective in preventing adolescent substance abuse.<sup>7</sup> (Parent education is discussed in more detail later in this paper.)
- ***Reach young people during non-school hours.*** Social and thinking skills-based programs can be offered in a number of environments, including after-school mentoring, individual therapy, and family management training.

### **Professional Development and Ongoing Technical Assistance**

There are indeed many key elements to consider when implementing a school-based prevention curriculum. One of the most important factors that helps to determine a program's success is the extent to which teachers are provided with both training and ongoing support in the content and methods of life skills education. One program that uses this approach is LifeSkills® Training.

### ILLUSTRATION: LifeSkills® Training<sup>8</sup>

LifeSkills Training (LST) is a school-based tobacco, alcohol, and drug abuse prevention program for adolescents, focusing on personal and social skills in combination with drug-resistance skills and prevention-related information. The U.S. Department of Education has rated this program as Exemplary, and CSAP has rated it as Model.

LST seeks to decrease the rates of onset and prevalence of alcohol, tobacco, and other drug use in young adolescents by doing the following:

- Increasing students' awareness of the kinds of environmental pressures they are likely to encounter
- Teaching them specific skills for effectively resisting these pressures
- Using peer leaders as program providers

LST was originally designed for students attending junior high or middle school, to be taught over three years: 15 class periods in Year 1, 10 booster sessions in Year 2, and 5 booster sessions in Year 3. The program covers three major content areas:

- ***Personal self-management skills***, such as decision-making and problem-solving skills, self-control skills for coping with anxiety, and self-improvement skills
- ***General social skills***, including skills for communicating effectively, learning to meet new people, and developing healthy friendships
- ***Drug-resistance skills and information***, designed to impact knowledge and attitudes concerning drug use, perceived norms (i.e., perceptions of what others think and do related to drug use), and ability to resist drug use influences from the media and peers

A new version of LST, suitable for upper elementary school students, has recently been developed. It contains material for a total of 24 classes (8 classes per year) to be taught from grades 3–5 or 4–6.

After participation in a two-day training workshop, the program can be taught by health professionals, teachers, or peer leaders. Program materials, which include a teacher's manual, student guide, and audiocassette tape, cost approximately \$5 per student per year.

LST has been extensively evaluated over the past 16 years in more than a dozen major federally funded studies by researchers at Cornell University Medical College and has been found to have significant and lasting effects in reducing youth substance use.

## **Tobacco Education Programs**

One area of particular interest to many communities is how school-based education can be used to discourage tobacco use among young people. In response to this need, a number of tobacco-based curriculum have been developed and tested in a variety of school settings. While program models vary, educational curricula that addresses social influences (of friends, family, and media) that encourages tobacco use among young people, have shown consistently more effectiveness than programs based on other models.

Recently a number of curriculums have been developed to prepare young people to serve as advocates for effective policy and program development at the national, state and community level. For example, Health and Human Development Programs (HHD), a division of Education Development Center, Inc. (EDC), on behalf of The World Health Organization, developed the Model School Health Tobacco Control Intervention.<sup>9</sup> This curriculum engages students in advocacy and action at the local, national, and international levels to counter the tactics of the tobacco industry and to create tobacco-free environments in their schools and communities. The curriculum uses skills-based education about tobacco and policies that provide tobacco-free environments. The emphasis of the curriculum is on developing and implementing environmental approaches rather than relying on educating individuals to create behavioral change. In keeping with this approach, young people and teachers are prepared to work with local communities to alter the physical, social, economic and legal environments that shape student tobacco use.

Whatever approach one may choose to adopt, it is important to consider what the research has shown to be the most essential elements of a successful program. The Centers for Disease Control and Prevention (CDC) has developed a set of recommended guidelines for the development of effective tobacco education programs. The CDC guidelines stress the need to:

- Develop and enforce a school policy on tobacco use.
- Provide instruction about the short- and long-term effects of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.
- Provide tobacco-use prevention education in kindergarten through 12th grade, with especially intensive instruction in junior high or middle school.
- Provide program-specific training for teachers.
- Involve parents and families in support of school-based programs to prevent tobacco use.
- Support cessation efforts among students and school staff who use tobacco.
- Assess the tobacco-use prevention program at regular intervals.

A recent study from the state of Oregon and the CDC presents some encouraging finds regarding the effectiveness of programs that adopt the CDC approach. The study showed that students in school districts funded to implement the CDC's school tobacco use prevention guidelines were about 20 percent less likely to smoke than students in non-funded schools. The Oregon Health Division found that between spring 1999 and spring 2000, smoking rates among eighth graders declined significantly more in a self-selected sample of funded schools (from 16.6 to 13 percent) than in a comparison group of non-funded schools (from 17 to 15.7 percent).<sup>10</sup>

### **How Can This Be Used in My Community?**

Schools have an unique opportunity to address alcohol, tobacco and other drug issues by developing comprehensive substance abuse prevention programs as part of a community-wide program. Given that most schools view curriculum as the corner stone of such a program, it is critically important for schools to provide classroom instruction that is evidence-based. It is clear from the research that skills-based education is the single most effective classroom-based approach available today. That being the case, schools can and should implement curricula that are skills-based. Specifically:

- Skills-based instructional approaches can be integrated into daily curricula at the elementary level and into social studies, science, and health courses at the middle and high school levels.
- Well-evaluated, standardized, skills-based curricula can be offered as part of comprehensive school health programs. A wide variety of educational curricula are being used in schools today, to varying degrees of effectiveness. (For assistance with identifying the most promising, evidence-based curricula, see the Resources section of this paper.)
- Culturally appropriate programs can and must be developed so that life skills education can be provided to all students in a sensitive and effective manner. Fortunately, many life-skills based programs such as Project ALERT and Life-Skills Education have been implemented with a wide variety of cultural and ethnic groups and have been shown effective in many of these settings.<sup>11</sup>
- Skill building can be an integral part of alternatives (programs specifically designed to stimulate and engage young people during non-school hours through positive, healthy activities that are alcohol-, drug-, and violence-free.) For more information, see the Northeast CAPT's paper, *Alternatives: A Strategy for Prevention Practitioners*.

Life skills education provides students with a variety of learning experiences that not only develop knowledge and attitudes but also skills that help young people make healthy decisions. While life skills education is a key element of effective school-based prevention programs, it is important to remember that it works best when combined with other prevention strategies such as services for students and their parents, and community-based efforts.

### **How Do I Know This Works?**

“We already know that a skills-based program has had a major impact on the behaviors and the attitudes of students in the sixth and seventh grades. Long term effects . . . carried over into the kids when they’ve gone to high school, so we’re really excited about those outcomes.”

—Dr. Mark Kerbel, Assistant Superintendent of Schools, Winchester Public Schools

Skills-based education has been one of the most studied prevention approaches. Numerous evaluations have been conducted of programs that apply this strategy. Many of these evaluations have demonstrated the efficacy of this approach. For example:

- Research has demonstrated that programs that support the development of competence skills, also protect young people, enhance well-being and promote resilience which in turn has been associated with lower levels of drug use.<sup>12</sup>
- Additional research has shown that educational interventions are most effective at reducing substance use when they combine knowledge-oriented interventions with the fostering of social and thinking skills.<sup>13</sup>
- Skills training (in particular, the LifeSkills® Training program described in as an illustration in this paper) has been evaluated extensively and shown to be effective in reducing alcohol and tobacco use in students of varying ages and backgrounds.<sup>14</sup> These extensive studies have shown:
  - ◆ In a longitudinal study, a group of predominantly white, middle class young people who participated in LifeSkills training from seventh through ninth grades were surveyed six years later and showed significantly lower levels of use of alcohol, tobacco, and marijuana as compared to controls.<sup>15</sup> These results included monthly and weekly cigarette smoking that was 15 to 27 percent lower than among controls, 25 percent lower heavy (pack-a-day) cigarette smoking rates, lower monthly marijuana use, and lower problem drinking (3 or more drinks per occasion).
  - ◆ A recent evaluation of the adaptation of a life skills training curriculum for younger students in grades 3 to 6 found measurable differences in children's substance-related attitudes and behaviors.<sup>16</sup> At the individual level, elementary students who received the program reported less smoking in the past year, higher anti-drinking attitudes, increased knowledge about substance use, lower normative expectations for smoking and alcohol use, and higher self-esteem at the posttest assessment, as compared with control students. At the school level, schools that offered the program showed average reductions of 61 percent for smoking and 25 percent for alcohol use when compared with control schools.
  - ◆ As mentioned earlier, there has been some promising research on the effectiveness of life skills education with minority adolescents. Botvin, Schinke, Epstein and Diaz<sup>17</sup> conducted a one-year follow-up of a school based LifeSkills program that was implemented with a sample of over three thousand predominantly minority students in 29 New York City schools. The prevention program taught drug refusal skills, anti-drug norms, personal self-management skills, and general social skills in an effort to provide students with skills and information for resisting drug offers, to decrease motivations to use drugs, and decrease vulnerability to drug use social influences. Results indicated that those

who received the program reported less smoking, drinking, drunkenness, inhalant use, and polydrug use relative to those that did not participate in the study. The program also had a direct positive effect on several cognitive, attitudinal, and personality variables believed to play a role in adolescent substance use.

### **Parent Education**

According to the US National Institute on Drug Abuse, an essential component of prevention should be education programs that provide training to parents or caregivers in using appropriate parenting strategies, reinforcing what the children are learning about drugs in schools, fostering opportunities for family discussions, and developing clear family policies about drug use.<sup>18</sup>

Parent education can enable families to better nurture and protect their children, assist the children in developing pro-social behaviors, and train families to deal more effectively with situations and problems that arise in the household. These program can target either families not known to have any specific issues related to drug use as well as families with children (and/or other family members) who are either actively using or are at risk for using drugs.

Specifically, parent education programs seek to assist parents in acquiring or improving parenting skills, child management abilities, psychological helping skills, relationship development, and empathy. Specific behavior changes that might be targeted to achieve these broad objectives include:

- Improving communication, problem solving, anger management, and coping skills
- Improving parents' own communication and relationship
- Learning more appropriate ways to deal with children's behavior problems
- Reducing punitive and authoritarian sanctions and providing more consistent discipline
- Reducing family stress levels and family conflict

### **How Can I Use This Strategy in My Community?**

Parent education is an important feature of an effective community-based prevention program. This is the case for several reasons. The first is that one of the single greatest risk factors for the use of drugs by young people is favorable attitudes and use of drugs on the part of their parents.<sup>19</sup>

Secondly, the parents of a community typically exert a strong influence over the manner in which local schools address substance abuse and other health issues. By educating parents to the importance of using strategies and approaches that have been proven effective, a community will increase the likelihood that such programs will be adopted both by schools and other youth service organizations. Finally, by raising parents' awareness regarding this issue, communities will be more likely to adopt additional prevention strategies that will further support young people by augmenting classroom instruction with policies, enforcement and the use of communications campaigns designed to create positive and healthy community norms.

Parent education is usually delivered through structured programs, provided in community or clinic settings. Skill training sessions may be for (1) parents alone, (2) parents together with their children, and (3) parents and their children, trained separately. Programs typically include activities such as didactic and interactive group sessions; demonstrations of communications and

conflict resolution skills, and opportunities for practice, role play and feedback. Many of the same techniques and principles for effective skills-based education discussed earlier apply to parent education as well. For example, those programs that tend to work best combine didactic presentations with opportunities for practice and feedback. In addition, effective programs are of adequate length, meeting over several sessions as opposed to a one-time lecture or discussion night. Finally, as stated previously, the programs move beyond simply providing information and focus on the development of critical skills that parents need to develop to talk effectively with their children about the harm associated with drug use, as well as be prepared to intervene if their children should become involved in drug use.<sup>20</sup>

### **ILLUSTRATION: The Strengthening Families Program<sup>21</sup>**

The Strengthening Families Program (SFP) is a family skills-training intervention targeted at 6- to 10-year old children considered to be at risk for substance abuse. The program is designed to reduce children's risk factors for substance abuse and other problem behaviors and to increase their protective factors. SFP participants meet for two to three hours weekly for 14 weeks, in groups ranging in size from 5 to 14 families. There are three components to the weekly meetings. Parents and children attend their own sessions separately during the first hour—that is, a parent training session for the parents and a children's training sessions for the children. These are followed by a one-hour family training session, which children and parents attend together. Developers found that the time spent working together as a family made a major difference in helping the families make real and sustained changes in their family interactions.

***Parent Skills Training*** includes lectures, demonstrations, discussions, role-playing, peer group support, games, and videos. Topics covered include “Developmental Expectancies and Stress Management,” “Communication,” “Alcohol, Drugs, and Families,” and “Limit Setting.” These lessons aim to increase parenting skills by increasing parents attention, praise, and empathy for their children; increasing parents' use of effective discipline and decreasing their use of physical punishment; and decreasing parents' use of substances.

***Children's Skills Training*** includes games, coloring and workbook activities, role-playing, puppet shows, and discussions; homework is also assigned. Like the Parent Skills training, each session covers a different topic, including “Social Skills,” “How to Say No to Stay Out of Trouble,” “Communication I: Speaking and Listening,” and “Coping Skills III: Coping with Anger.” The curriculum is designed to increase children's skills by improving their ability to resist peer pressure to engage in various negative behaviors, including substance abuse, and increasing their knowledge about alcohol and other drugs; developing their self-esteem, recognition of feelings, and communication skills; reducing aggressiveness and other problem behaviors; and increasing compliance with parental requests.

***Family Skills Training*** offers a forum for parents and children to practice their new skills. The curriculum is divided into three phases. In the “The Child's Game,” parents learn how to listen to and understand their children, and how to gain insight into the behaviors and emotions of their children. “The Communications Game” offers instruction to parents on appropriate parenting behavior. In “The Parents' Game,” parents learn to start introducing rules and restrictions to their children, using their new understanding of and empathy for their children.

To increase participation and retention in SFP, sites have implemented various methods of assistance and incentives for participation. For example, besides the facilities being easy for participants to reach, some sites also provide transportation to the facilities. Meals, snacks, or recreational activities can be offered after the two-hour session itself. Besides acting as a reward, these activities give families additional time together to practice their new skills. Child care and adolescent activities may be offered for children not participating in the program.



### **How Do I Know Parent Education Works?**

In the case of *The Strengthening Families Program* illustrated above, independent evaluations of these programs have demonstrated positive outcomes, including:

- Improved parenting skills, including decreased use of corporal punishment, less parental depression and social isolation, and decreased parental substance abuse
- Improvement in child risk patterns, including reduction in children's problem behaviors, improved emotional status, increased pro-social behavior, and reduced reported intention to use tobacco and alcohol
- Improved family function and environment, including family relationships, organization, and cohesion, and reduced family conflict

In additions to the evaluations conducted on this specific program, numerous studies have been conducted on a variety of parent education programs that have been developed over the past two decades. Research *across* these programs have yielded the following lessons.<sup>22</sup>

- Parent and family skills training have positive effects on measures related to parents, the family, and children. Positive outcomes can include increases in parenting skills, problem-solving skills, child management skills, and coping skills, as well as improvements in attitudes.
- Parent and family training can improve parent-child family relations, increase family cohesion, and decrease family problem behaviors, family conflict, and substance abuse.
- When parents' effectiveness improves through family skills training, parental substance abuse sometimes decreases.
- When parents who are being treated for substance abuse problems also take part in family skills training, the training sometimes has an impact on substance abuse above and beyond the treatment effect; participation may reduce the likelihood of relapse, especially among women.
- Videotaped training and education components can be effective and cost-efficient elements of parent training programs; added to therapist consultation and group discussion, they can promote parental modeling and improve parenting skills.

### **Merchant Education and Server Training**

In the past few years, many communities have mandated or encouraged merchants to be trained and to train their staff on strategies to prevent illegal sale of alcohol to underage and intoxicated patrons. Responsible Beverage Service (RBS) training has not only gained popularity over the past decade, but 21 states have passed legislation related to responsible training—11 states have laws mandating RBS training, and 10 states have laws promoting this practice.

RBS programs teach servers and retailers to seek identification from anyone appearing under the age of 30, how to recognize and confiscate false identification, how to tell when adults are buying for young people, how to recognize when a patron is intoxicated, how to delay service to patrons who are drinking dangerously quickly, and how to refuse sales to minors or intoxicated patrons. Some trainings also encourage establishments that serve alcohol to promote food and nonalcoholic beverages, maintain minimum staffing levels, establish standards for customer behavior, and seek transportation for intoxicated customers.<sup>23</sup>

A typical RBS training is divided into several modules or session which include the following: the concept of server liability and the day-to-day implications, the dangers of alcohol use such as driving with high BAC levels and the risks of underage drinking, alcohol beverage control (ABC) laws, identifying potential problems such as intoxicated customers, how to respond to potential problems, among other lessons.<sup>24,25,26</sup> Trainings usually combine face-to-face trainings, interactive activities, and videos.

Merchant education can also be applied to the reduction of tobacco sale to young people. Several communities across the nation have trained merchants who sell tobacco to understand the laws concerning the sale of tobacco to young people under the age of 18, and how to identify and handle youth who are trying to break the law. Merchant education programs for tobacco sellers are usually implemented with a variety of strategies including randomly inspecting stores to check compliance with tobacco sales laws, media campaigns teaching children about the dangers of smoking, and others.<sup>27,28</sup> A major force on the efforts to reduce sales of tobacco to youth came in 1992 when Congress passed the Synar Amendment that required each state to have and enforce an effective law prohibiting the sale of tobacco products to children under 18 years of age. The law stipulated that states failing to comply will lose a portion of their block grant funds for substance abuse prevention, so as a result many states have implemented strategies to reduce the sale of tobacco to minors such as merchant education.

### **How Can This Strategy Be Used in My Community?**

There are many benefits to mandating or promoting merchant and server education in your community.

- According to several studies between 50 to 75 percent of all alcohol sales in retail outlets are to underage or intoxicated customers.<sup>29</sup> Two studies that used actors pretending to either be under the age of 21 or intoxicated showed that 47 percent of the youthful buyers and 68 percent of the intoxicated buyers were served alcohol.<sup>30,31</sup>
- RBS trainings can also reduce alcohol-related motor vehicle crashes. According to two analyses, between 40 to 60 percent of intoxicated drivers had recently left a licensed drinking establishment.<sup>32</sup>
- Dram shop laws have been enacted in many states, which hold merchants of alcohol financially liable for damage caused by their intoxicated or underage customers, have encouraged merchants to implement RBS trainings.

- Communities can sponsor merchant and server education programs, which vary in cost, quality, and results. The most effective programs available are intensive, high-quality, conducted face-to-face, and are accompanied by strong and active management support.<sup>33</sup> RBS trainings can be offered in a variety of setting such as a local community college, through the local police department, or on-site in the various establishments.

As a community decides what approach to merchant and server education it will adopt, it is also important to consider which factors account for program success. For example:

- Getting managers to participate in the trainings will increase their support of the servers undergoing the training, and will promote the skills and practices encouraged by the trainings.
- Lowering license fees to establishments that train all their staff may encourage local businesses to participate in merchant and RBS trainings.
- Developing a system to train new employees at establishments that already trained their staff will ensure that the new staff members are aware of state laws and community regulations. This can include having in-house trainers that train new employees as part of the orientation process or having monthly community-wide trainings for new employees of all establishments in the area.
- Developing support from the general public to pass legislation mandating or promoting RBS trainings. According to a national survey 89 percent adults questioned were in favor of policies that require server/owner training.<sup>34</sup>
- Providing booster courses for servers after the initial training increases programs' success. A study of the long-term effects of a server-training program in Rhode Island found that while the program did have positive effects on serving practices, these effects decreased over time (but remained higher than pre-training levels).<sup>35</sup>
- Merchant education relating to tobacco sale to young people, research shows that although it *can* be effective in raising awareness and reducing sales,<sup>36</sup> the effectiveness of merchant education programs is greatly enhanced when coupled with rigorous enforcement of existing tobacco control policies.<sup>37</sup>

### **ILLUSTRATION: University Implements Widespread Campaign to Encourage Responsible Beverage Service and Consumption**

High-risk (or “binge” drinking—the practice of consuming multiple drinks over a short period of time) is a serious problem at colleges and universities nationwide. A 1993 national survey of more than 17,000 students at 140 four-year colleges and universities, conducted by the Harvard School of Public Health, found that 44 percent of the students surveyed were high-risk drinkers. Alcohol-related deaths on campus have figured prominently in the news in recent years, along with exposés on date rape, drunk driving, and other dangerous behaviors associated with high-risk drinking. Campus enforcement of a minimum drinking age is difficult, as students of all ages host parties, and the number of enforcement personnel is limited.

In 1991, Stanford University received a three-year grant from the California State Office of Traffic Safety to reduce problems related to student drinking by encouraging responsible alcoholic beverage service. The Stanford Community Responsible Hospitality Project aimed to encourage members of the Stanford community conduct safe parties and to present a clear and consistent message of responsible drinking (where legal) and hospitality. The project had five important strategies:

- Developing a group of trained student peer educators, called the Party Pros. Serving as consultants to students who were planning parties, the Party Pros offered help in selecting themes, entertainment, decorations, food, and beverages, as well as in budgeting, fund-raising, and promoting the parties.
- Training peer educators to ensure that their fellow students were familiar with State and campus alcohol policies and laws and to help student groups such as fraternities and sororities develop policies for their social activities.
- Training student bartenders, as well as sober party monitors to oversee the guests. “Escort coordinators” were also trained to ensure that guests used designated drivers or had other safe transportation at the end of the evening.
- Sponsoring quarterly Event Planning Fairs, with presentations on liability issues and school policies. The Fairs included a trade show where local businesses—such as disc jockeys, party suppliers, caterers, and florists—promoted their services.
- Establishing the Hospitality Alliance with local businesses and public safety officials, who agreed to promote responsible drinking and beverage service—and to occasionally take action against those who did not. For example, student members of the Alliance joined with a local restaurant to voice complaints about another local establishment’s ads in the campus newspaper, offering 25-cent drinks; the ads were subsequently dropped.

Findings from the project showed a positive change in the university’s drinking environment; students were holding smaller and more controlled parties, using sober monitors and trained bartenders, checking IDs, and serving food and nonalcoholic beverages. Even after the Office of Traffic Safety funding ended, the Party Pros and the Hospitality Alliance continued to function at Stanford.

## How Do I Know Server Training Works?

Several studies have been conducted on the effectiveness of this approach including:

- An evaluation of an RBS program entitled “Training for Intervention Procedures by Servers of Alcohol” (TIPS) showed that trained servers were more likely to intervene in situations where a customer was too intoxicated than were servers at control sites. The same evaluation found that none of the pseudo-patrons who participated in the evaluation was allowed by trained servers to get intoxicated after they were trained, compared with 37.5% of pseudo-patrons who left the same bar legally drunk prior to the server training. Overall the BAC levels for the pseudo-patrons at the time they left the bar were lower after the training than before the training at the time they left the bar.<sup>38</sup>
- An evaluation conducted in bars on Navy bases in California found that number of drinks per person, drinks per hour, and the size of the drinks decreased over time after the training, and was lower than in similar bars that did not conduct the training.<sup>39</sup>
- An evaluation of Project ARM, a one-on-one consultation program for owners and managers of bars, found an 11.5 percent decrease of underage sales, and a 46 percent decrease in pseudo-intoxicated buyers after the program was implemented.<sup>40</sup>
- RBS programs have been linked to the reduction of drunk-driving fatalities. For example, three years after Oregon mandated server training for all liquor-serving establishments, the state saw a 23 percent decrease in single-vehicle nighttime crashes.<sup>41</sup>
- Evaluations of merchant and community education programs about laws forbidding tobacco sales to minors found that such programs *can* be effective in raising awareness and reducing sales,<sup>42</sup> although the effectiveness of merchant education programs is greatly enhanced when coupled with rigorous enforcement of existing tobacco control policies.<sup>43</sup>

## RESOURCES

### Skill-Building Programs

The LifeSkills Training (LST) Program described in this paper is an invaluable resource. Botvin and Griffin wrote extensively about LST in an article for the *International Journal of Emergency Mental Health* (Botvin, G. J., and Griffin, K. S. [2002]. "Life skills training as a primary prevention approach for adolescent drug use and other problem behaviors," *IJEMH*, 4, (41–47). Their article provides an overview of the theoretical underpinnings of LST, along with a description of the program's components, materials, and methods. Findings from more than two decades of evaluation research are reviewed, demonstrating that the LST approach consistently produces positive behavioral effects on alcohol, tobacco, and other drug use. The role of competence enhancement-based primary prevention programs in preventing other negative behaviors during adolescence is also discussed.

For more information on LST, contact Tracy Diaz, senior project coordinator, or Elizabeth Paul, Ed.D., who can each provide general program information, or the program's developer, Gilbert Botvin, Ph.D., at:

LifeSkills® Training  
National Health Promotion Associates, Inc.  
141 South Central Avenue, Suite 208  
Hartsdale, NY 10530  
Telephone: (914) 421-2525 (main number) or (800) 293-4969  
Fax: (914) 683-6998  
E-mail: gjbottvin@mail.med.cornell.edu, or LSTinfo@nhpanet.com  
Web site: [www.lifeskillstraining.com](http://www.lifeskillstraining.com)

### Tobacco Education Programs

Two documents are valuable resources on this topic:

- *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction* (from MMWR Recommendations and Reports, February 25, 1994), available online at [www.cdc.gov/mmwr/preview/mmwrhtml/00026213.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/00026213.htm), summarizes the school-based strategies that are most likely to be effective in preventing tobacco use among youth.
- *Model School Health Tobacco Control Intervention*, funded by the World Health Organization, Headquarters (WHO/HQ), Department of Non-Communicable Disease, Prevention and Health Promotion (NPH), Non-Communicable Diseases and Mental Health Cluster (NMH), Tobacco- Free Initiative, Geneva, Switzerland, and prepared by Health and Human Development Programs (HHD), a division of Education Development Center, Inc. (EDC).

## **Merchant Education and Server Training**

The Alcohol Epidemiology Program at the University of Minnesota offers useful information on both voluntary and mandatory Responsible Beverage Service (RBS) training. Its Web site provides helpful suggestions for implementing RBS programs in communities, and lists considerations for communities wishing to establish RBS ordinances. For more information, see *Commercial Access to Alcohol: Strategies to Reduce Youth Access to Alcohol*, available online at [www.epi.umn.edu/alcohol/policy/comrcial.html](http://www.epi.umn.edu/alcohol/policy/comrcial.html).

| <b>CSAP's<br/>Northeast CAPT</b> | <b>CSAP</b>                               |
|----------------------------------|---|
| Policy                           | Environmental<br>Approaches               |
| Enforcement                      | Environmental<br>Approaches               |
| Collaboration                    | Community-<br>Based<br>Processes          |
| Communications                   | Information<br>Dissemination              |
| Education                        | Prevention<br>Education                   |
| Early Intervention               | Problem<br>Identification<br>and Referral |
| Alternatives                     | Alternatives                              |



## ENDNOTES

- <sup>1</sup> Gardner, S. E., and Brounstein, P. J. (2001). *Series Guide to Science-Based Practices. Principles of Substance Abuse Prevention*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention, Division of Knowledge Development and Evaluation. Available online at [www.northeastcapt.org/resources/csap/papers/gardner-cover2.html](http://www.northeastcapt.org/resources/csap/papers/gardner-cover2.html)
- <sup>2</sup> Block, J., Block, J., and Keyes, S. (1988). Longitudinally foretelling drug usage in adolescence: Early childhood personality and environmental precursors. *Child Development*, 59(2), 336–355; Jessor, R. (1976). Predicting time of onset of marijuana use: A development study of high school youth. *Journal of Consulting Psychology*, 44(1), 125–134; Kellam, S. G., Brown, C. H., and Flemming, J. P. (1982). The prevention of teenage substance use: Longitudinal research and strategy. In T. J. Coates, A. C. Peterso, and C. Perry, (Eds.) *Promoting Adolescent Health: A Dialog on Research and Practice* (pp. 171–200) New York: Academic Press; Shedler, J., and Block, J. (1990). Adolescent drug use and psychological health: A longitudinal inquiry. *American Psychologist*, 45(5), 612–630; as cited in National Center for the Advancement of Prevention (1996). *A Review of Alternative Activities and Alternatives Programs in Youth - Oriented Prevention: CSAP Technical Report 13*. Washington, DC: Department of Health and Human Services. DHHS Publication No. (SMA) 96-3117.
- <sup>3</sup> Scheier, L. M., Botvin, G. J., Diaz, T., and Griffin, K. W. (1999). Social skills, competence, and drug refusal efficacy as predictors of adolescent alcohol use. *Journal of Drug Education*, 29, 251–278.
- <sup>4</sup> Kellam, S. G., Rebok, G. W., Ialongo, N., and Meyer, L. S. (1994). The course and malleability of aggressive behavior from early first grade into middle school: Results of a developmental epidemiologically based proactive trial. *Journal of Child Psychology and Psychiatry*, 35, 259–281.
- <sup>5</sup> Connell, D. B., Turner, R. R., and Mason, E. F. (1985). Summary of findings of the School Health Education Evaluation: Health promotion effectiveness, implementation, and costs. *Journal of School Health*, 55, 316–321; Walter, H. J., Vaughn, R. D., and Wynder, E. L. (1989). Primary prevention of cancer among children: Changes in cigarette smoking and diet after six years of intervention. *Journal of the National Cancer Institute*, 81, 995–998; Johnson, C. A., Pentz, M. A., Weber, M. D., Dwyer, J. H., Baer, N., MacKinnon, D. P., Hansen, W. B., and Flay, B. R. (1990). Relative effectiveness of comprehensive community programming for drug abuse prevention with high-risk and low-risk adolescents. *Journal of Consulting and Clinical Psychology*, 58, 447–456; Botvin, G. J., Schinke, S. P., Epstein, J. A., and Diaz, T. (1994). Effectiveness of culturally focused and generic skills training approaches to alcohol and drug abuse prevention among minority youths. *Psychology of Addictive Behaviors*, 8, 116–127; Shope, J. T., Kloska, D. D., Dielman, T. E., and Maharg, R. (1994). Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six–eight. *Journal of School Health*, 64, 160–166; Perry, C. L., Williams, C. L., Veblen-Mortenson, S., Toomey, T. L., Komro, K. A., Anstine, P. S., McGovern, P. G., Finnegan, J. R., Forster, J. L., Wagenaar, A. C., and Wolfson, M. (1996). Project Northland: Outcomes of a community-wide alcohol use prevention program during early adolescence. *American Journal of Public Health*, 86, 956–965.
- <sup>6</sup> Tobler, N. S. (1986). Meta-analyses of 143 adolescent drug prevention programs: Quantitative outcome results of program participants compared to a control or comparison group. *Journal of Drug Issues*, 16, 537–567; Errecart, M. T., Walberg, H. J., Ross, J. G., Gold, R. S., Fiedler, J. L., and Kolbe, L. J. (1991). Effectiveness of Teenage Health Teaching Modules. *Journal of School Health*, 61, 26–30; Tobler, N. S. (1992). Drug prevention programs can work: Research findings. *Journal of Addictive Diseases*, 11, 1–28.
- <sup>7</sup> Hawkins, J. D., Catalano, R., et al. (1992). *Communities that Care: Action for Drug Abuse Prevention*. San Francisco, CA: Jossey-Bass; Pentz, M. A. (1995). The school-community interface in comprehensive school health education. In S. Stansfield (Ed.), *1996 Institute of Medicine Annual Report, Committee on Comprehensive School Health Programs*. Washington, DC: National Academy Press; Dishion, T. J., Andrews, D. W., Kavanagh, K., and Soberman, L. H. (1996). Preventing interventions for high-risk youth: The Adolescent Transitions Program. In R. D. Peters and R. J. McMahon (Eds.), *Preventing Childhood Disorders, Substance Abuse, and Delinquency*. Thousand Oaks, CA: Sage Publications; Kumpfer, K. L.,

- 
- Molgaard, B., and Soth, R. (1996). The Strengthening Families Program for the prevention of delinquency and drug use. In Peters and McMahon, *Preventing childhood problems*.
- <sup>8</sup> Botvin, G. J., and Griffin, K. W. (2002). Life skills training as a primary prevention approach for adolescent drug use and other problem behaviors. *International Journal of Emergency Mental Health*, 4, 41–47.
- <sup>9</sup> *Model School Health Tobacco Control Intervention*. Funded by The World Health Organization, Headquarters (WHO/HQ), Department of Non-Communicable Disease, Prevention and Health Promotion (NPH), Non-Communicable Diseases and Mental Health Cluster (NMH), Tobacco-Free Initiative, Geneva, Switzerland, and prepared by Health and Human Development Programs (HHD), a division of Education Development Center, Inc. (EDC).
- <sup>10</sup> CDC (August 10, 2001). Effectiveness of School-Based Programs as a Component of a Statewide Tobacco Control Initiative — Oregon, 1999–2000. *Morbidity and Mortality Weekly Report*, 50 (31). Available online at [www.cdc.gov/tobacco/research\\_data/youth/mmwr\\_oregon.htm](http://www.cdc.gov/tobacco/research_data/youth/mmwr_oregon.htm).
- <sup>11</sup> Ellickson, P. L., McCaffrey, D. F., Ghosh-Dastidar, B., and Longshore, D. L. (In Press). “New inroads in preventing adolescent drug use: Results from a large-scale trial of project ALERT in middle schools.” *American Journal of Public Health*.
- <sup>12</sup> Griffin, K. W., Scheier, L. M., Botvin, G. J., and Diaz, T. (2001). The protective role of personal competence skills in adolescent substance use: Psychological well-being as a mediating factor. *Psychology of Addictive Behaviors*, 15, 194–203.
- <sup>13</sup> Shope, J. T., Kloska, D. D., Dielman, T. E., and Maharg, R. (1994). Longitudinal evaluation of an enhanced alcohol misuse prevention study (AMPS) curriculum for grades six–eight. *Journal of School Health*, 64, 160–166, as cited in Gardner, S. E., Brounstein, P. J., and Stone, D. B. (2001). *Science-Based Substance Abuse Prevention: A Guide*; Botvin, G. J., and Griffin, K. W. (2002). Life skills training as a primary prevention approach for adolescent drug use and other problem behaviors.
- <sup>14</sup> Botvin, G. J., and Griffin, K. W. (2002). Life skills training as a primary prevention approach for adolescent drug use and other problem behaviors.
- <sup>15</sup> Botvin, G. J., Baker, E., Dusenbury, L., Botvin, E. M., and Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. *Journal of the American Medical Association*, 273, 1106–1112.
- <sup>16</sup> Botvin, G. J., Griffin, K. W., Paul, E., and Macaulay, A. P. (2003). Preventing tobacco and alcohol use among elementary school students through Life Skills Training. *Journal of Child & Adolescent Substance Abuse*.
- <sup>17</sup> Botvin, G. J., Schinke, S. P., Epstein, J. A., and Diaz, T. (1995). Effectiveness of culturally-focused and genetic skills training approaches to alcohol and drug abuse prevention among minority adolescents: Two-year follow-up results. *Psychology of Addictive Behaviors*, 9(3), 183–194.
- <sup>18</sup> National Institute on Drug Abuse (2003). *Preventing Drug Use Among Children and Adolescents: A Research-Based Guide for the Community*. Available from the National Clearinghouse for Alcohol and Drug Information at [www.health.org](http://www.health.org) or by calling (800) 729-6686.
- <sup>19</sup> Hawkins, J., Catalano, R., and Miller, J. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112(1), 64–105.
- <sup>20</sup> Lang, C., and Krongard, M. (1999). *Strengthening Families and Protecting Children from Substance Abuse: A Guide for Practitioners and State and Local Policymakers*. CSAP’s Northeast Center for the Application of Prevention Technologies. Newton, MA: Education Development Center, Inc.
- <sup>21</sup> Lang, C., and Krongard, M. (1999). *Strengthening Families and Protecting Children from Substance Abuse: A Guide for Practitioners and State and Local Policymakers*.
- <sup>22</sup> Lang, C., and Krongard, M. (1999). *Strengthening Families and Protecting Children from Substance Abuse: A Guide for Practitioners and State and Local Policymakers*.
- <sup>23</sup> Saltz, R. (1987). The roles of bars and restaurants in preventing alcohol-impaired driving: An evaluation of server intervention. *Evaluation and Health Professions*, 10, 5–27.

- 
- <sup>24</sup> Saltz, R. (1987). The roles of bars and restaurants in preventing alcohol-impaired driving: An evaluation of server intervention.
- <sup>25</sup> Saltz, R. F. (1986). Server intervention—will it work? *Alcohol Health and Research World*, 10, (4), 13–19.
- <sup>26</sup> Vegega, M. E. (1986). NHTSA Responsible Beverage Service Research and Evaluation Project. *Alcohol Health and Research World*, 10, (4), 20–23.
- <sup>27</sup> Chaloupka, R., and Pacula, R. L. (1998). *Limiting Youth Access to Tobacco: The Early Impact of the Synar Amendment on Youth Smoking*. Working paper, Department of Economics, University of Illinois at Chicago.
- <sup>28</sup> Centers for Disease Control and Prevention (1999, August). *Best Practices for Comprehensive Tobacco Control Programs—August 1999*. Atlanta GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
- <sup>29</sup> Toomey, T. L., Wagenaar, A. C., Gehan, J. P., Kilian, G., Murray, D. M., and Perry, C. L. (2001). Project ARM: Alcohol risk management to prevent sales to underage and intoxicated patrons. *Health Education & Behavior*, 28(2), 186–199.
- <sup>30</sup> Forster, J. L., McGovern, P. G., Wagenaar, A. C., Wolfson, M., Perry, C. L., and Anstine, P. S. (1994). The ability of young people to purchase alcohol without age identification in northeastern Minnesota, USA. *Addiction*, 89, 699–705.
- <sup>31</sup> Toomey, T. L., Wagenaar, A. C., Kilian, G., Fitch, O., Rothstein, C., and Fletcher, L. (1999). Alcohol sales to pseudo-intoxicated bar patrons. *Public Health Reports*, 114(4), 337–342.
- <sup>32</sup> Shults, R. A., Elder, R. W., Sleet, D. A., Nichols, J. L., Alao, M. O., and Carande-Kulis, V.G. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine*, 21(4 Suppl S):66-88.
- <sup>33</sup> Shults, R. A., Elder, R. W., Sleet, D. A., Nichols, J. L., Alao, M. O., and Carande-Kulis, V. G. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving.
- <sup>34</sup> Wagenaar, A. C., Harwood, E. M., Toomey, T. L., Denk, C. E., and Zander, K. M. (2000). Public opinion on alcohol policies in the United States: Results from a national survey. *Journal of Public Health Policy*, 21(3), 303–327.
- <sup>35</sup> Buka, S. L., and Birdthistle, I. J. (1999). Long-term effects of a community-wide alcohol server training intervention. *Journal of Studies on Alcohol*, 60, 27–36.
- <sup>36</sup> Altman, D. G., Foster, V., Rasenick-Douss, L., and Tye, J. B. (1989). Reducing the illegal sale of cigarettes to minors. *Journal of the American Medical Association*, 261, 80–83; Altman, D. G., et al. (1991). Sustained effects of an educational program to reduce sales of cigarettes to minors. *American Journal of Public Health* 81, 891–893; Keay, K. D., Woodruff, S. I., Wildey, M. B., and Kenney, E. M. (1993). Effects of a retailer intervention on cigarette sales to minors in San Diego County, California. *Tobacco Control*, 2, 145–151; Wildley, M. B., Woodruff, S. I., Agro, A., Keay, K. D., Kenney, E. M., and Conway, T. L. (1995). Sustained effects of educating retailers to reduce cigarette sales to minors. *Public Health Reports*, 110, 625–629; Skretny, M. T., Cummings, K. M., Sciandra, R., and Marshall, J. (1990). An intervention to reduce the sale of cigarettes to minors. *New York State Journal of Medicine*, 90, 54–55.
- <sup>37</sup> Center for Substance Abuse Prevention (1997). *Reducing Tobacco Use Among Youth: Community-Based Approaches—Prevention Enhancement and Protocols System (PEPS)*. Washington, DC: Department of Health and Human Services. DHHS Publication No. (SMA) 97-3146; Feighery, E., Altman, D. G., and Shaffer, G. (1991). The effects of combining education and enforcement to reduce tobacco sales to minors: A study of four Northern California communities. *Journal of the American Medical Association*, 266, 3168–3171; Jason, L. A., Ji, P. Y., Anes, M. D., and Birkhead, S. H. (1991). Active enforcement of cigarette control laws in the prevention of cigarette sales to minors. *Journal of the American Medical Association*, 266, 3159–3161.
- <sup>38</sup> Geller, E. S., Russ, N. W., and Delphos, W. A. (1987). Does server intervention training make a difference? An empirical field evaluation. *Alcohol Health & Research World*, 11, (4), 64–69.
- <sup>39</sup> Saltz, R. F. (1986). Server intervention—will it work? *Alcohol Health and Research World*, 10(4), 13-19.

- 
- <sup>40</sup> Toomey, T. L., Wagenaar, A. C., Gehan, J. P., Kilian, G., Murray, D. M., and Perry, C. L. (2001). Project ARM: Alcohol risk management to prevent sales to underage and intoxicated patrons. *Health Education & Behavior*, 28(2), 186–199.
- <sup>41</sup> Holder, H. D., and Wagenaar, A. C. (1994). Mandated server training and reduced alcohol-involved traffic crashes: A time series analysis of the Oregon experience. *Accident Analysis and Prevention*, 26(1), 89–97.
- <sup>42</sup> Altman, D. G., Foster, V., Rasenick-Douss, L., and Tye, J. B. (1989). Reducing the illegal sale of cigarettes to minors. *Journal of the American Medical Association*, 261, 80–83; Altman, D. G., et al. (1991). Sustained effects of an educational program to reduce sales of cigarettes to minors. *American Journal of Public Health*, 81, 891–893; Keay, K. D., Woodruff, S. I., Wildey, M. B., and Kenney, E. M. (1993). Effects of a retailer intervention on cigarette sales to minors in San Diego County, California. *Tobacco Control*, 2, 145–151; Wildley, M. B., Woodruff, S. I., Agro, A., Keay, K. D., Kenney, E. M., and Conway, T. L. (1995). Sustained effects of educating retailers to reduce cigarette sales to minors. *Public Health Reports*, 110, 625–629; Skretny, M. T., Cummings, K. M., Sciandra, R., and Marshall, J. (1990). An intervention to reduce the sale of cigarettes to minors. *New York State Journal of Medicine*, 90, 54–55.
- <sup>43</sup> Center for Substance Abuse Prevention (1997). *Reducing Tobacco Use Among Youth: Community-Based Approaches—Prevention Enhancement and Protocols System (PEPS)*. Washington, DC: Department of Health and Human Services. DHHS Publication No. (SMA) 97-3146; Feighery, E., Altman, D. G., and Shaffer, G. (1991). The effects of combining education and enforcement to reduce tobacco sales to minors: A study of four Northern California communities. *Journal of the American Medical Association*, 266, 3168–3171; Jason, L. A., Ji, P. Y., Anes, M. D., and Birkhead, S. H. (1991). Active enforcement of cigarette control laws in the prevention of cigarette sales to minors. *Journal of the American Medical Association*, 266, 3159–3161.